Performance Management
Principles and Processes for Setting Ecosystem Recovery Targets
For February 17, 2011 Leadership Council meeting

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Proposed Action: Provide direction on principles and processes for Partnership's adoption of ecosystem recovery targets as part of the 2011 revision of the Action Agenda.

Summary: An important function of the Puget Sound Partnership is to develop targets for ecosystem recovery to guide and allow evaluation of recovery activities. Setting targets is a key step in the Partnership's role of holding the system accountable for progress toward recovery. The Partnership will adopt ecosystem recovery indicators for its Dashboard of ecosystem indicators and for reductions in key ecosystem pressures as part of the 2011 revision of the Action Agenda. Two targets will be discussed at this meeting and others will be advanced to the Leadership Council for adoption in June 2011. The Partnership's principles and processes for developing candidate targets and for adopting targets can be clarified by this discussion.

Background: The Leadership Council, Science Panel, and Ecosystem Coordination Board have discussed target setting at meetings throughout 2010 and early 2011.

On December 14, 2011, the Panel met in a workshop with members of the Council and Board and with staff to discuss the implications of the findings of the Puget Sound Science Update. A key result of this discussion was a recommendation that the Partnership adopt ecosystem recovery targets to address the full breadth of the Partnership's interests in a recovered ecosystem.

Attachment 1 provides slightly modified version of a January 7 document articulating the Partnership staff commitment to advancing target setting in a manner that is responsive to the December 14 discussion. The January 7 document was discussed with the Science Panel on January 11 and included in meeting materials provided in advance of the February 3 meeting of the Ecosystem Coordination Board. The modification clarifies that targets are not expected for three of the Dashboard indicators: quality of life index (indicator still under development); Sound behavior index (indicator still under development); commercial fish harvest (lacking science on how harvest contributes to human well-being)

Attachment 2 provides staff perspective on the Partnership's principles and processes for target setting. This document is intended as a companion to the January 7 document to elaborate and better articulate some of the issues related to target setting.

Analysis: Per RCW 90.71.310(1)(c), "The action agenda shall include near-term and long-term benchmarks designed to ensure continuous progress needed to reach the goals, objectives, and designated outcomes by 2020." Per RCW 90.71.280(3), "the [leadership] council shall confer with the [science] panel on incorporating … benchmarks into the action agenda."

The Partnership has applied the term "targets" to refer to long-term benchmarks designed to ensure progress needed to reach goals.

The current Action Agenda does not include targets to express the desired ecosystem conditions related to recovery. Partnership staff and boards anticipate that establishing ecosystem recovery targets will be a key improvement in the 2011 revision of the Action Agenda. Targets will be used to by the Partnership, EPA, the Governor, the Legislature, and the public to evaluate recovery progress.

As noted by the Partnership's Science Panel, targets for ecosystem recovery are expressions of desired states of the Puget Sound ecosystem and can be informed by scientific information.

Issue 1: Do recovery targets consider feasibility and management effort?

Page 2 of "Principles and Processes for Target Setting" (February 3, 2011; Attachment 2) recognizes that the Leadership Council might consider the feasibility of achieving a result and reflect the organization's commitment to new or increased recovery efforts as it adopts recovery targets. This principle has not been discussed or adopted by the Leadership Council.

The February 3, 2011 ECB discussion of potential recovery targets suggested that the Partnership's recovery targets should characterize a healthy, resilient Puget Sound ecosystem. Board members suggested that the Partnership's targets should not incorporate considerations of the feasibility of results or likelihood that results would be achieved. The ECB suggested that any consideration of feasibility be done following an objective review of the science.

A performance management perspective – presented in "*How to Set and Manage with Targets*" (B. Willet, OFM 3/31/2009), a publication of Governor Gregoire's Government Management Accountability and Performance (GMAP) office – suggests that targets reflect an organization's intent to change performance conditions to achieve the specified result. Willet offers the following definitions to distinguish aspirational goals from performance targets:

- Goal – A condition or state that an organization is striving to achieve. Goals are usually long-term and ***may be beyond what might reasonably be expected to be achieved***.

- Target – An organization's intended results for a program or service [set to show the magnitude of desired change]. If current performance is not currently capable of regularly meeting or exceeding the target, there is an implication that the organization will change or improve something ***to meet or exceed the target***.

  (Emphasis added)

The distinction between aspirational goals and performance targets might be further explained by different applications of the SMART mnemonic for developing performance objectives. Targets in the sense conveyed by the ECB (performance management's goals) and performance targets would both be (S) specific and (M) measurable. Targets as defined by the ECB would be (A) aspirational or ambitious and (R) relevant. In contrast, performance targets would be (A) appropriate or achievable and (R) realistic. Either concept of target would be (T) time bound, although there might be differences about how the timeframes relate to 2020.

Leadership Council discussion and guidance related to the distinction between these two concepts will help clarify the nature of targets that will be adopted by the Partnership. Specific questions for Leadership Council consideration and discussion include:

- Should the Partnership's ecosystem recovery targets be set as aspirational goals?
- If the Partnership's ecosystem recovery targets are set as aspirational goals, might it be appropriate for the Partnership to adopt intermediate performance measures that we (and our funders, evaluators, and the public) expect to be achieved?
- Should we articulate the resource commitments and behavioral changes necessary to achieve ecosystem recovery targets and/or intermediate performance measures?
- Should the Partnership's ecosystem recovery targets refer to timeframes beyond 2020? Or do the Partnership's targets reflect aspirations or realistic expectations for conditions in 2020?

Issue 2: How can we best ensure appropriate science and policy engagement in target setting?

Attachments 1 and 2 describe an approach to Partnership target setting that relies on development of technical background information, solicitation and consideration of stakeholder perspectives on potential targets, and Leadership Council decisions on targets.

Background information to support targets is being developed by subject matter experts, "Indicator Champions" for Dashboard indicators and teams convened to develop information to support pressure reduction targets. Following this first technical phase of work, strategy, program, and policy considerations related to options for targets will be discussed by implementers and stakeholders. Stakeholder perspectives will be summarized for consideration by the Leadership Council.

This phased process with the separation between science and program/policy input is a modification of the integrated, interdisciplinary team approach suggested previously by Partnership staff.

Does the Leadership Council concur with two phased approach: first reviewing the science and then considering implementation issues?

Issue 3: How will the Partnership revise targets adopted in 2011 and add new targets?

Attachments 1 and 2 acknowledge that the Partnership will set additional targets and improve existing targets based on improvements in scientific understandings (e.g., about ecosystem conditions or pressures on the ecosystem). Page 2 of Attachment 2 expresses the principle that reevaluation of recovery targets would be triggered by evaluation of scientific information at the direction of the Science Panel. The Leadership Council may request, at any time, that the Science Panel review the availability of new scientific information that might support reevaluation of recovery targets.

Does the Leadership Council concur with this approach?

Next Steps:

1. Leadership Council adopts targets for eelgrass and shellfish beds restored
2. Staff and partners develop background information for remaining targets
3. Scientific review completed for remaining targets
4. Stakeholder and implementer input gathered on options for the Partnership's ecosystem recovery targets
5. Leadership Council adopts remaining targets

Attachments:

- Attachment 1: Setting recovery targets for the Puget Sound ecosystem (January 7, 2011, modified)
- Attachment 2: Principles and processes for target setting (February 14, 2011)

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Setting recovery targets for the Puget Sound ecosystem

Gerry O'Keefe – Executive Director, Puget Sound Partnership

January 7, 2011 (modified February 15, 2011)

Consistent with direction provided by the Puget Sound Partnership Leadership Council throughout 2010 and advice from the Partnership's Science-Policy discussion on December 14, 2010, Partnership staff will support adoption of at least 20 targets for ecosystem recovery as a key feature of the first biennial revision of the Action Agenda in 2011.

What Is Target Setting?

For the Puget Sound Partnership, ecosystem targets articulate a vision of a healthy Puget Sound ecosystem and conditions we expect to achieve by 2020.[1] The Partnership's ecosystem targets are expressions of desired future conditions: healthy status (the ultimate objective) and/or the objectives for 2020 (desired status on a trajectory toward healthy status).

The Partnership will develop two types of targets.

- For ecosystem components, targets describe desired future conditions of human health and well-being, species and food webs, habitats, water quantity, and water quality. Targets for ecosystem components will help the Partnership and others to interpret information about the status of the ecosystem and to understand the gap between observed and desired conditions. In 2011, the Partnership will adopt targets for
    - Most of our Dashboard of Ecosystem Indicators
    - Acres of restored estuary (an Environment Protection Agency indicator for National Estuary Programs including Puget Sound).

- For pressures on the ecosystem (i.e., sources of stressors and stressors that degrade the status of the ecosystem), targets describe desired reduction in the level of pressure. These targets will guide revisions to Action Agenda implementation strategies, the priority of near-term actions, recommendations for allocation of funding and other resources to specific strategies and actions, and the evaluation of the success of Action Agenda implementation. The Partnership intends that other implementing agencies will use these targets to identify and design activities that contribute

[1] Per Washington State statute RCW 90.71.310(1)(c): "the action agenda shall include near-term and long-term benchmarks designed to ensure continuous progress needed to reach the goals, objectives, and designated outcomes by 2020."

to achieving these targets, to align their allocation of funding and other resources to these outcomes, and to evaluate the effects of their investments and activities

Role of Science

The Partnership will adopt ecosystem targets as policy statements informed by science. One important scientific consideration is the amount of time required for the ecosystem to respond to our actions. For example, the recovery targets for healthy orca or salmon populations will likely not be realized until well beyond 2020 even under the best possible actions. Consequently, the Partnership's targets will describe the desired status for 2020 and where it is different, the ultimate desired status beyond 2020.

Another scientific consideration is the linkages and relationships among ecosystem components (such as food webs). To the extent possible, we will set targets based on the levels necessary for suites of ecosystem components to work together in a functioning ecosystem. Finally, scientists will consider the uncertainty in the data and information. For example, differences in the availability and quality of information or scientific models means that the targets will be uneven in how certain we are that they represent the desired self-sustaining, healthy state or in the policy consensus about the targets.

How Do We Get The Work Done?

We will need Partnership staff and many others to be engaged in scientific assessments and policy discussions to support the adoption of the proposed topics for ecosystem recovery targets (Table 1). Because pressure reduction targets are central to the 2011 revision of the Action Agenda, we will focus detailed attention on five pressure reduction targets (Table 1, center). We will also need Partnership staff and the "Indicator Champions" from the different agencies and tribes who have been refining the Dashboard of Ecosystem Indicators to help provide the analyses to set targets for those indicators. We will need our boards and councils to review the targets and provide guidance. Your enthusiasm to help, which you showed so strongly at Partnership's Science-Policy discussion in December, is essential for us to succeed.

Then What?

We will continue to set additional targets to reflect objectives of the suites of strategies and actions we are engaged in. We will also continue to improve existing targets based on better scientific understanding. Learning from what we are doing and adapting targets and associated strategies to reach the targets is central to the Partnership's commitment to science-based, adaptive management and a developing a Sound-wide culture of learning and continuous improvement.

Table 1. Topics for Puget Sound Partnership target setting for 2011

Ecosystem recovery goal	Key pressure or strategic focus	Dashboard indicator
Human health & well-being		Shellfish growing areas Swimming beaches Recreational fishing licenses
Species and food webs		Orca Salmon Herring Birds
Habitats	Land development Shoreline alteration Nearshore restoration	Land use/land cover Shoreline alteration Estuary restoration* Eelgrass
Water quantity & quality	Stormwater (runoff from built environment) Wastewater (on-site & treatment plants)	Water availability Toxics in fish Toxics in sediment Marine water quality index Freshwater quality index
(Programmatic)		Funding for Puget Sound Action Agenda engagement

* Not a Dashboard indicator but a key Environment Protection Agency performance measure for Puget Sound and National Estuary Program evaluation and reporting.

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Principles and processes for target setting

February 15, 2011

Background

Per RCW 90.71.310(1)(c), "The action agenda shall include near-term and long-term benchmarks designed to ensure continuous progress needed to reach the goals, objectives, and designated outcomes by 2020." Per RCW 90.71.280(3), "the [leadership] council shall confer with the [science] panel on incorporating … benchmarks into the action agenda."

Strategic Priority E.1.1 of the Action Agenda calls for the establishment of measures and benchmarks for assessing progress in the ecosystem as one of five major components of the Partnership's performance management system. Elements E.1.1.3 and E.1.1.4 of this strategy call for identification of targets for ecosystem indicators and identification of intermediate outcomes with measurable targets and benchmarks, respectively. Per near-term action E.1.1 (parts a and b), these steps were scheduled to be complete by November 1, 2009. Sub-element E.1.1.5 calls for refinement of intermediate outcomes to reflect advancements related to the ecosystem goals, outcomes, and indicators.

General approach to setting ecosystem recovery targets

The Puget Sound Partnership's Leadership Council will adopt ecosystem recovery targets that (1) reflect scientific understandings about ecosystem conditions, functions, and services and (2) articulate the Council's vision about desired future conditions for the Puget Sound ecosystem

Setting targets will be a two-phased approach. First, scientists will provide objective information about possible future conditions and describe the scientific knowledge, assumptions, and uncertainties in order to provide a range of potential future conditions as specific targets for ecosystem recovery. In phase two, entities involved in implementing protection and restoration strategies and actions and other key partners and stakeholders will provide input on the potential benefits and challenges of the science-based target alternatives. Finally, the Leadership Council will adopt targets based on this information.

The Puget Sound Partnership will develop new targets or revise previously adopted targets as new scientific information becomes available.

Principles guiding development of background information and ecosystem recovery target decisions

Phase 1

- Science-based descriptions of ecosystem states and pressures for use as targets should be objective and set out a range of possible targets. These may be based on (1) references directions (e.g., increase or decrease from current levels), (2) baseline conditions (e.g., using historical conditions or existing locations relatively free from human pressures or disturbance as reference conditions), and (3) modeling biological relationships between pressures and ecosystem attributes.
- Technical information to support target setting and decisions about targets should incorporate consideration of variable, shifting and uncertain environmental and climate conditions
- Technical information to support target setting and decisions about targets should incorporate consideration of current and future conditions across the Action Areas and watersheds of the Puget Sound basin.
- Science-based descriptions of specific ecosystem conditions and pressures for use as targets need to be based on the ecological tradeoffs and dependencies among different components of the ecosystem (e.g., eelgrass targets need to be consistent with salmon targets).

Phase 2

- Input from the ECB, Lead Organizations, near term action implementers, and other stakeholders should be compiled to help inform the Leadership Council on the potential benefits and challenges of the range of target alternatives.

Leadership Council Target Adoption

The Leadership Council's articulation of desired future conditions might encompass a range of ecosystem states, reflecting ranges of willingness to invest resources, willingness to adjust current social and economic patterns that are harmful to Puget Sound, and/or understandings and perceptions about the need for new or increased recovery efforts. The range of desired future conditions for the Puget Sound ecosystem might encompass:

- Fully functioning, highly resilient states, in which there is relatively high confidence that ecosystem structures, functions, and services will be sustained into the future.
- Balanced states in which social, economic, and ecological perspectives of ecosystem condition and ecosystem recovery provide some degree of confidence that a functioning system will be sustained into the future.
- Substantially improved states, in which there is some confidence that recovery objectives will be achieved by improved strategies, increased level of effort, etc.
- Projected or expected states, in which there is some confidence that recovery objectives will be achieved by continuation of current strategies, programs, etc.

Target Adaptive Management

Evaluation of improved scientific information about ecosystem conditions and pressures should trigger reevaluation of Puget Sound ecosystem recovery targets at the direction of the Partnership's Science Panel. Science Panel evaluation of scientific information related to ecosystem recovery targets will be conducted every two years as part of the Science Panel's contributions to the State of the Sound and/or as part of revisions to the Puget Sound Science Update.

Specific process steps and timeline for 2011 target setting

The Partnership is applying viability analysis from the *Open Standards for the Practice of Conservation* as a tool to develop information to support target setting. This analysis approach is described in more detail in materials available at conservationmeasures.org. The process for 2011 work is as follows:

1. Individuals and teams with subject matter expertise will develop technical background information on target setting for each topic using the *Open Standards* viability analysis approach (e.g., using ranges to describe ecosystem conditions and defining categories of conditions to describe current conditions and possible targets).

For ecosystem components, target setting will advance under the leadership of "indicator champions." Guidance for this work was provided in early February. Meetings to discuss the approach to and progress with the work will be convened on February 15 and in mid-March (Mar. 14, 15, or 16).	For pressure reductions, target setting will advance by the efforts of interdisciplinary teams -- small groups of subject matter experts convened by Partnership staff – which began meeting in late January or early February. The first work of these teams will be to outline a range of target alternatives based on science.

   Brief technical reports (similar to those produced in January for eelgrass and shellfish beds re-opened) authored by the indicator champions (and any collaborators) will be delivered March 23, 2011.

2. In April and early May 2011, Science Panel members will conduct scientific review of the technical reports prepared by indicator champions and interdisciplinary teams.

3. The interdisciplinary teams convened to support development of targets for pressure reductions will then bring in their programmatic expertise to define strategies, contributing factors, and results chains related to the alternative levels of pressure reduction. This work will be captured in brief technical reports (similar to the chapters of the Partnership's November 2009 technical memorandum on results chains) to be prepared shortly after March 23, 2011.

4. In April and May 2011, science advisors will evaluate relationships (tradeoffs, dependencies, etc.) among target topics and specific objectives and provide an ecosystem-perspective analysis of candidate targets.

5. In April and May 2011, implementers and stakeholders will review and evaluate technical reports and communicate their perspectives on possible targets for Partnership consideration

6. In early June 2011, Partnership staff will compile information on implementer and stakeholder perspectives and summarize scientific input from review and from ecosystem-perspective analysis for presentation to Leadership Council.

7. In mid-June, 2011 the Leadership Council will adopt targets for publication in the public review draft of the 2011 revision of the Action Agenda.